The ferns and flowering plants of Nantucket—XVII

EUGENE P. BICKNELL

COMPOSITAE—*continued*

BACCHARIS HALIMIFOLIA L.

Very local, and confined to the eastern side of the island. As long ago as 1849 it was rather numerous on Coskaty, according to Mrs. Owen, and it is abundant there today. It occurs also on Coatue, and extends sparingly from Polpis southeasterly towards Siasconset, well away from any direct saline influence. A single small plant was seen in one of the higher bogs on Saul's Hills, and a shrub nearly seven feet tall in Gibb's Swamp. In 1904 a large clump grew in dry open ground about a mile northwest of Siasconset. Not yet in bloom September 6, 1904; in full flower September 17, 1899.

PLUCHEA CAMPHORATA (L.) DC.

Common about pools and mud flats in tidal marshes, blooming in August and September.

ANTENNARIA PLANTAGINIFOLIA (L.) Richards.

Found everywhere throughout the island, along roadsides, on banks and in pine groves, in damp meadows with *A. neglecta* and on dry hills with *A. neodioica*, on the plains and commons and on dry lichen-clothed levels in the poorest soils. In full flower May 31, 1909, except in the shade of pines where only the most forward plants were in bloom; mostly gone to seed by June 15, 1910.

Exceedingly variable, forms with broad rounded leaves, and forms with narrowly oblanceolate leaves on elongated petioles (var. *petiolata* Fernald) often growing side by side. A small form having narrow and acute leaves, collected in the Miacomet pines, is especially noteworthy by reason of reddish glandular hairs scattered along the stems, these being rather numerous in some examples. More noteworthy still is a very small form found also among the Miacomet pines. It is at once set apart from

reduced examples of true *A. plantaginifolia* by perfectly white instead of purple styles, and is further well characterized by very small, orbicular to obovate, short-petioled basal leaves, often in a close rosette, their blades only 0.75–1.5 cm. broad; the cauline leaves are mostly blunt or rounded at the apex, their upper surface invested with a minute appressed tomentum quite different from the loosely arachnoid pubescence characteristic of the attenuate-tipped cauline leaves of true *A. plantaginifolia*. Not any of the pistillate plants were taller than 10–15 cm., and the few staminate plants found were only 3–5 cm. high; in several of them a few of the involucral bracts were bright rose color. Altogether the plant possesses a combination of striking characters that give it quite the aspect of a most distinct species. But certain Nantucket specimens of *A. plantaginifolia* show a tendency to develop somewhat similar characters, thus making it doubtful whether the smaller plant is other than a localized variety of the common species.

*ANTENNARIA FALLAX Greene.

On Prospect Hill in the western outskirts of the town, also on a dry slope at Capaum Pond, only a few plants at each station. In full flower June 10, 1909; flowers passing, June 5, 1911. A stout form of the species, becoming 4 dm. high, the acute leaves 2–3 cm. broad, pubescent on the upper surface; some stems with a few purplish glandular hairs below the rather close corymb.

*ANTENNARIA NEODIOICA Greene.

Rather common locally, but wanting in many parts of the island; perhaps most frequent on the rolling commons westward from the town; Madequet, Shawkemo, Siasconset. In full bloom, but also much of it only just in flower May 30, 1909, some heads mature by June 6.

Much of the Nantucket plant appeared to be somewhat aberrant, and specimens sent to Professor Fernald proved to be his var. *attenuata* (Proc. Bost. Soc. Nat. Hist. **28**: 245. 1898). My collections seem to show that this variety is more common on Nantucket than the typical plant. Professor Fernald writes me that it appears to be more common than the type in the Canadian zone.

*ANTENNARIA NEGLECTA Greene.

In damp fields and open places, rather scarce and found mainly on the western side of the island. In full flower May 31, 1909; mature heads June 7, 1908.

*ANTENNARIA PETALOIDEA Fernald.

An extensive colony of this interesting plant overspreads many rods of a sterile hilltop field southwest of Capaum Pond, an extreme southern outpost of the species. On May 30, 1909, in fullest bloom, it was far more conspicuous in the whiteness of its inflorescence than any of our more familiar Antennarias, appearing like snow drifted along the hilltop with outlying patches down the slope. I had never before met with the species nor understood just how it differed from *A. neglecta*, but the eye needed no closer inquiry to approve it instantly as a beautifully distinct plant. Professor Fernald, who has kindly examined my specimens, writes me that they are typical of his var. *subcorymbosa* (Rhodora **16**: 133. 1914) not known hitherto from south of Mt. Desert, whence it extends locally along the coast to Prince Edward's Island and eastern Nova Scotia, there very common, and further eastward to Newfoundland.

ANAPHALIS MARGARITACEA (L.) Benth. & Hook.

Not an abundant plant, but widely scattered over the island. It is frequent in close patches among the mixed growths of herbs and low woody plants that like miniature thickets are scattered over the plains and rolling upland, and is common in more open colonies on parts of Great Neck. Corymbs white, but no open flowers, July 10, 1912; in full flower through August and September.

The close groups or patches, often far distant from each other, that are natural to its habit of growth in poor soils, are noticeable early in the season before the stems appear, from the whitish green color of the basal leaves; by midsummer it has become a conspicuous plant from the snowy whiteness of its flowering corymbs.

GNAPHALIUM OBTUSIFOLIUM L.

Common in dry soils, often in white sand among the beech grass. Plants very small up to late June; in full flower in August and September.

GNAPHALIUM ULIGINOSUM L.

Locally common in damp fields and cartways and occasional in the town streets. First flowers June 17, 1910; blooming through September.

GNAPHALIUM PURPUREUM L.

On sandy levels about most of the ponds along the south side of the island, especially Nobadeer and Madequecham Ponds, sometimes in great abundance. Collected by Miss Gardner at Sachacha Pond. Reddened flower heads June 7, 1909; plants still small but in full flower July 9, 1912; flowers passing September 13, 1907.

*INULA HELENIUM L.

Sparingly established in a meadow near the Springfield House and in a low field at the southern end of the town. In full flower August 4, 1906; out of bloom August 27, 1904.

RUDBECKIA HIRTA L.

Frequent or rather common in many parts of the island. According to Mrs. Owen its first appearance on Nantucket was probably about 1878 and ten years later it was rather common at Siasconset and becoming so elsewhere.

HELIANTHUS DIVARICATUS L.

Common on the plains and moorland towards Siasconset, and local throughout the eastern third of the island, not seen on the western two thirds. In exposed places on poor soils it is often much dwarfed, with unusually narrow leaves and few flowering heads or only a single one. In full bloom August 6, 1904; mostly passed flowering September 17, 1907.

HELIANTHUS STRUMOSUS L.

Locally common in the northeastern quarter of the island in dry soil about the borders of thickets; not seen west of Swain's Neck. No flowers up to August 3, 1906; in full bloom September 17, 1907.

*HELIANTHUS ANNUUS L.

Occasional in waste ground and in old fields. In full flower August 11, 1906.

*HELIANTHUS SCABERRIMUS Ell.

A casual waif. A single small flowering plant in an old field September 15, 1899; one plant past flowering September 20, 1907, in waste spot west of the town; a few small plants near Crooked Lane June, 1908.

HELIANTHUS TUBEROSUS L.

Yards and waste places and by roadsides, mainly near the town, growing in close colonies and not coming into full bloom until late in the season. Plants a few inches high June 3, 1909; a precocious flowering head September 11, 1904; earliest flower September 14, 1907.

BIDENS CERNUA L.

Frequent in wet places and locally abundant, as at Watt's Run and along ditches west of the town. Just in flower August 30, 1904; in full bloom September 14, 1907. Stout forms, having closely serrate leaves becoming 4 cm. broad, correspond with specimens in the herbarium of the New York Botanical Garden labeled var. *elliptica* by Dr. Wiegand (Bull. Torr. Club, **26**: 417–418).

BIDENS CONNATA Muhl.

Everywhere in low grounds, in bogs and along pond shores. At Maxcy's Pond five feet tall, with leaves as deeply lobed as in the smaller forms. No flowers up to August 15, 1906; just in flower at the end of August, 1904; blooming through September.

*BIDENS PETIOLATA Nutt.

Collected only in low grounds west of the town. Freshly in bloom September 21, 1899.

A plant of wet woods and thickets rather than of open bogs, and apparently not a common species on the immediate coast. I used to find it an abundant and characteristic plant of low open woods and shaded swamps in the lower Hudson River region where *Bidens connata* was of such rarity, if it occurred at all, that I never met with it. When first coming to know this plant in its coastal bogs I could not doubt that it was distinct from the Hudson Valley species, and my observation of the two plants for many years has only confirmed that view.

*BIDENS FRONDOSA L.

Frequent in low grounds and waste places about the town; sometimes on pond shores. In early flower at the end of August, 1904; in full flower September 10, 1907.

*BIDENS VULGATA Greene.

Frequent in yards and waste places and by streetsides in the town; Shawkemo. Just in flower in early September, 1904; in full flower September 16, 1907.

***Galinsoga aristulata** sp. nov.

Galinsoga parviflora var. *hispida* DC. not *G. hispida* Benth.

A few plants on Easton Street in full flower September 13, 1907; Fair Street, September 19, 1914; specimen in herbarium of Miss Grace B. Gardner.

This now widespread weed wherever I have met with it has not failed to prove itself always readily distinguishable from the true *G. parviflora* Cav., even without reference to the constant and pronounced differences in the pappus scales. Nevertheless I do not discover that it has ever received an available specific name. In some European gardens of today it is evidently known as *G. brachystephana* Regel, since it has been grown at the New York Botanical Garden from seeds received from Europe under that name. There are before me specimens raised from such seeds that, noting their similarity to our plant known as *G. parviflora* var. *hispida*, I took from the herbaceous beds at the garden September 11, 1898. Although the close counterpart of these specimens has not been found in any example of our common weed met with since that time their divergencies, however obvious, are not greater than might well be expected to mark a long established garden form of so variable a plant. In any case, however, there need be no doubt that the name *G. brachystephana* in its use for this plant has been mistakenly applied. I have not been able to consult the rare pamphlet (Ind. Sem. Hort. Turic, 1846) that contains the original description of *G. brachystephana*, which species, if we may so understand its history, came from seeds received in Europe about the year 1846, from what country does not appear. Nor do I find any descriptive text in the different issues of that period of In-

dex Seminum Hortus Botanicus Imperialis Petropolitanus wherein the name appears. But a description, presumably a transcript of the original, is found in Walper's Repertorium (**6**: 722. 1846–7). Therein we read, "*ligulae amoene roseae.*" The correlation is thus evidently with *G. caracasana* (DC.) Sch. Bip. and not with our white-rayed species. Another name requiring to be considered is *Wiborgia urticaefolia* H. B. K. (*G. urticaefolia* Benth.). An excellent illustration of this plant accompanying its description (Nov. Gen. et Sp. **4**: 257. *pl. 389.* 1820) shows that it is closely related to our species but differs by larger rays and the absence of a pappus. *G. Humboldtii* Heiron. (Bot. Jahrb. **28**: 618. 1899–1900) based on a variety of *G. urticaefolia*, which is cited as a synonym, differs in having a short coroniform pappus, thus excluding our plant with elongated attenuate or aristulate pappus scales. In some respects the characterization of *G. quadriradiata* Ruiz & Pav. (Syst. Veg. 198. 1798) might seem to refer to our plant but, as a whole, it is more descriptive of, and clearly applicable to, a mere form of *G. parviflora* Cav. (*G. quinquiradiata* Ruiz & Pav. *l. c.*), as was long ago determined by De Candolle.

ACHILLEA MILLEFOLIUM L.

Fields and roadsides, flowering from early June until October. In its best developed state it is often only slightly pubescent, and is branched above the middle to form an ample compound corymb, the heads having rays 2.5–3.5 mm. broad. Reduced and more pubescent forms of poorer soils have more contracted leaves and are unbranched, bearing a single terminal corymb of somewhat smaller heads.

Dr. Rydberg, who has examined my Nantucket collections of *Achillea*, finds that certain specimens are quite clearly referable to the plant recognized in Europe as *A. asplenifolia* Vent. (*A. rosea* Desf.), in which the flowers are prevailingly rose color to magenta, and the ultimate subdivisions of the leaves finally thickened and callous at the ends below the cartilaginous pointed tip. The status of this plant, however, seems not to be very clear, and the question of its formal recognition may well await a better understanding of its relationship to *A. Millefolium.*

*ACHILLEA OCCIDENTALE Raf.

Specimens of this have been determined by Dr. Rydberg who

points out to me that its more obvious differences from *A. Millefolium* are smaller rays, 1.5–2 mm. wide, more delicately dissected leaves with narrower unmargined or but slightly margined midrib, and more arachnoid pubescence, the crowded heads commonly with more cylindric involucres and narrower and paler or more stramineous bracts. This yarrow seems to be not uncommon on Martha's Vineyard, where I have collected very typical examples, and also on Long Island and near New York. When last on Nantucket I did not well enough distinguish it from *A. Millefolium* to learn its real status there, although noting that a yarrow having very small rays, now presumably this, was not at all an uncommon plant.

*ACHILLEA PANNONICA Scheele, Linnaea **18**: 471. 1835.

A. lanata Spreng, Cat. Fl. Hal. 1799, not Lam. 1778.

This yarrow of southeastern Europe, not before, I think, reported from America, occurs in scattered growth on the dry plains towards the south shore of Nantucket especially near Madequecham Pond. In full flower July 9, 1912.

A very distinct appearing plant as compared with our common forms, densely white woolly throughout and with congested rounded or convex corymbs, and small rays 1–1.5 mm. wide. The numerous densely lanose-pubescent cauline leaves are narrow and ascending or erect, their short segments and subdivisions more or less incurved and closely crowded together. Dr. Rydberg, who has determined the identity of my specimens, has called my attention to the marked characters by which this plant differs from *A. lanulosa* Nutt. which in some respects it resembles.

ANTHEMIS COTULA L.

Mainly in and about the town and suburbs, but also in fields and waste places. A precocious flower June 18, 1910; first flowers June 27, 1912; blooming until late autumn.

CHRYSANTHEMUM LEUCANTHEMUM L.

Abundant throughout the island, whitening the fields in June. Sometimes growing in close groups in pure sand among the beach grass. First flowers May 30, 1909; in full flower June 7, 1908. All presumably the var. *pinnatifidum* Lecoq & Lamotte.

CHRYSANTHEMUM PARTHENIUM (L.) Pers.

Occasionally spontaneous by streetsides and in waste places. Not yet in flower June 14, 1908; in full flower June 27, 1912.

The more common form of this plant seen in old gardens and as an escape, has a broad pale yellow disk and short rays and would appear to be the var. *breviradiatum* Rouy (Fl. de France **8**: 263). On this understanding the less usual plant, with us, having a smaller bright yellow disk and longer rays would be the typical form. This was found growing sparingly in a barnyard west of the town in full flower September 17, 1899, and in two instances by streetsides in the town.

*CHRYSANTHEMUM BALSAMITA L.

A casual estray from cultivation, and at a few stations persistent and spreading in abandoned grounds. Large flower heads August 29, 1904; heads yellow but not actually in flower September 11, 1907.

TANACETUM VULGARE L.

Frequent near old barns and farm houses and in abandoned grounds usually growing in close masses and appearing as if a survival of cultivation. The var. *crispum* DC. is perhaps more frequent than the typical form. Begins to bloom in August and continues in full flower through September.

ARTEMISIA CAUDATA Michx.

A characteristic plant of the commons and open sandy places and often growing in pure sand among the beach grass. No heads visible June 27, 1910; inflorescence appearing June 20, 1908; not quite in bloom July 13, 1912.

ARTEMISIA VULGARIS L.

An infrequent weed, seen only about the wharves. In full flower September 5, 1904.

*ARTEMISIA BIENNIS Willd.

A single stout plant near the wharves just in flower September 5, 1904; one plant back of the beach at Wauwinet, June 20, 1910, the heads very immature.

*ARTEMISIA ANNUA L.

Collected near the Springfield House in 1901 and, more recently west of the town, by Mrs. Flynn; Main Street, September 14, 1914, Walter Burdick, specimen in herbarium of Miss Gardner.

*ARTEMISIA ABSINTHIUM L.

In full flower about a remote abandoned dwelling in Squam September 1, 1904; streetside in the town 1912.

*ARTEMISIA PONTICA L.

Casually persistent and spreading as a survival of cultivation, not seen in flower. It is more frequent on Martha's Vineyard, but only as a relic or an estray from old gardens.

*ARTEMISIA STELLERIANA Bess.

A characteristic plant of the sea beaches, mainly on the north side of the island, growing in dense confluent patches on the white sand beyond the reach of the tides; rarely seen away from the immediate shore, but becoming established in spots among the beach grass above the highest bluffs. Nearly in flower May 30, 1909, June 7, 1911; earliest flowers June 17, 1910; past its height of bloom June 27, 1912; continuing to produce some flowering stems during the summer and sometimes into September.

ERECHTITES HIERACIFOLIA (L.) Raf.

Very common, especially among the open groups of mixed woody and herbaceous vegetation that are scattered over the plains, this being the first predominating plant that springs up after these growths have been laid waste by fires. It is even more abundant among the windrows of shore refuse back of the beaches around Sachacha Pond where it becomes unusually stout and hairy and develops much purplish coloring in its upper parts. Plants a few inches high June 19, 1910, June 27, 1912; in full flower during September.

SENECIO VULGARIS L.

Streets and alleys in the town and outlying waste places, also in cultivated fields at the Cabot farm in Shimmo and on the Appleton farm at Miacomet Pond. Mature seeding heads before the end of May, but continuing to bloom throughout the season, doubtless until frost.

ARCTIUM MINUS Schk.

Infrequent; neglected places and about farm buildings near the town; Quaise; Shawkemo; Great Neck. Blooms from August through September.

*ARCTIUM TOMENTOSUM (Lam.) Schk.

The common burdock of Nantucket, inhabiting barnyards and waste places all over the island. Often with very large cottony heads and otherwise strongly typical but sometimes with the heads smaller and only thinly arachnoid, more like those of *A. minus*. Occasional forms appear to approach *A. Lappa* L. which has not yet been detected on the island. In bloom from August through September.

CIRSIUM LANCEOLATUM (L.) Hill.

Roadsides and open places in all parts of the island but nowhere in abundance. Basal leaves only June 15, 1910; first flower July 14, 1912; blooming through September.

CIRSIUM DISCOLOR (Muhl.) Spreng.

Locally common in the northeastern quarter of the island from Shawkemo to Polpis, Pocomo and, especially, in Squam. Most frequent about thickets near the shore. Comes into bloom the latest of the thistles. First flowers September 11, 1907.

CIRSIUM ODORATUM (Muhl.) Britton.

Along roadsides, and widely scattered over the downs and commons. It is often strongly developed, and plants were observed bearing as many as nine flowering heads besides several not yet in bloom. First flowers June 20, 1910, June 27, 1912; mostly past flowering in August, but flowering heads are not unusual late in the month and even in September. Heads of palest pink are frequent; occasionally they are pure white.

CIRSIUM HORRIDULUM Michx.

Common, mainly in brackish soil or in low grounds near the shore, but found as well in damp places in all parts of the island, and not infrequently in dry sandy soil, even among open growths of pine. The flowering heads, normally of a yellowish color, are often deep reddish purple medially or, rarely, throughout. First flowers June 2, 1909, June 7, 1908, June 7, 1911; some plants past flowering by June 25, 1910; mostly out of bloom by the middle of July or earlier; rarely a flowering head is produced in September.

CIRSIUM ARVENSE (L.) Scop.

Frequent near the town, and occasional elsewhere, but not much of it anywhere. First flowers July 1, 1912.

*CENTAUREA CYANUS L.

Transient in and near the town. First flowers on strayed plants June 6, 1911, June 21, 1910; flowering earlier in gardens.

*CENTAUREA MELITENSIS L.

Waste ground near Surfside, July 9, 1912, a few plants in earliest flower.

During the publication of this series further exploration on Nantucket, both by myself and by others, has brought to light a considerable number of plants not before discovered there. These later additions to the flora will be recorded in an appendix.